chapter1

October 29, 2020

```
[ ]: print("Hello world!")
```

```
[2]: import matplotlib.pyplot as plt
     plt?
```

```
Type:          module
String form: <module 'matplotlib.pyplot' from '/opt/anaconda3/lib/python3.8/
 ↪site-packages/matplotlib/pyplot.py'>
File:          /opt/anaconda3/lib/python3.8/site-packages/matplotlib/pyplot.py
Docstring:
`matplotlib.pyplot` is a state-based interface to matplotlib. It provides
a MATLAB-like way of plotting.

pyplot is mainly intended for interactive plots and simple cases of
programmatic plot generation::

    import numpy as np
    import matplotlib.pyplot as plt

    x = np.arange(0, 5, 0.1)
    y = np.sin(x)
    plt.plot(x, y)

The object-oriented API is recommended for more complex plots.
```
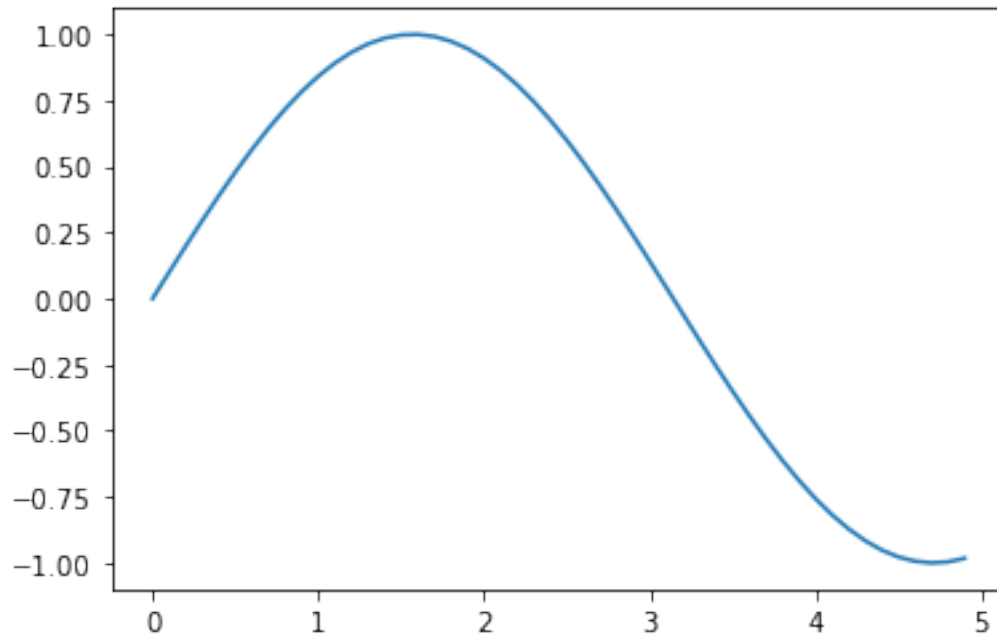
```
[3]: import numpy as np
     import matplotlib.pyplot as plt

     %matplotlib inline

     x = np.arange(0, 5, 0.1)
     y = np.sin(x)
     plt.plot(x, y)
```

```
[3]: [<matplotlib.lines.Line2D at 0x7ff4f57b1ac0>]
```

```python
import os
os.environ['PATH']
```

'/Library/TeX/texbin'

```python
%env
```

{'TERM_SESSION_ID': 'w0t0p1:4B46D497-FCE1-41D4-9CB2-3E00821F7C40',
 'SSH_AUTH_SOCK': '/private/tmp/com.apple.launchd.SOSopbFUqG/Listeners',
 'LC_TERMINAL_VERSION': '3.3.12',
 'COLORFGBG': '15;0',
 'ITERM_PROFILE': 'Default',
 'XPC_FLAGS': '0x0',
 'LANG': 'en_GB.UTF-8',
 'PWD': '/Users/henrycooksley',
 'SHELL': '/bin/zsh',
 'TERM_PROGRAM_VERSION': '3.3.12',
 'TERM_PROGRAM': 'iTerm.app',
 'PATH': '/Library/TeX/texbin',
 'LC_TERMINAL': 'iTerm2',
 'COLORTERM': 'truecolor',
 'TERM': 'xterm-color',
 'HOME': '/Users/henrycooksley',
 'TMPDIR': '/var/folders/r9/56wvf6wj5kxgz9snstslc1w00000gn/T/',
 'USER': 'henrycooksley',
 'XPC_SERVICE_NAME': '0',

        'LOGNAME': 'henrycooksley',
        'ITERM_SESSION_ID': 'w0t0p1:4B46D497-FCE1-41D4-9CB2-3E00821F7C40',
        '__CF_USER_TEXT_ENCODING': '0x1F5:0:2',
        'SHLVL': '1',
        'OLDPWD': '/opt/anaconda3/bin',
        'PAGER': 'cat',
        'LESS': '-R',
        'LSCOLORS': 'Gxfxcxdxbxegedabagacad',
        'CONDA_EXE': '/opt/anaconda3/bin/conda',
        '_CE_M': '',
        '_CE_CONDA': '',
        'CONDA_PYTHON_EXE': '/opt/anaconda3/bin/python',
        'CONDA_SHLVL': '1',
        'CONDA_PREFIX': '/opt/anaconda3',
        'CONDA_DEFAULT_ENV': 'base',
        'CONDA_PROMPT_MODIFIER': '',
        '_': '/opt/anaconda3/bin/jupyter',
        'JPY_PARENT_PID': '9745',
        'CLICOLOR': '1',
        'GIT_PAGER': 'cat',
        'MPLBACKEND': 'module://ipykernel.pylab.backend_inline'}

[6]:
```
!echo $PATH
```

/Library/TeX/texbin

[8]:
```
!export PATH=/Library/TeX/texbin:$PATH
```

[9]:
```
!jupyter nbconvert chapter1.ipynb --to pdf
```

zsh:1: command not found: jupyter

[10]:
```
!which xelatex
```

/Library/TeX/texbin/xelatex